

WHAT IS CLAIMED IS:

1. A method of preparing a polishing pad suitable for

, 2 chemical mechanical polishing of a semiconductor wafer,

3 comprising:

4 providing a polishing pad having an hygroscopic absorbency;

5 soaking the polishing pad with an aqueous medium for a time

6 sufficient to equilibrate the pad to prior to polishing with the

7 pad; and

8 placing the polishing pad on a polishing platen subsequent

9 to the soaking.

2. The method as recited in Claim 1 wherein soaking

2 includes soaking at about 10°C to 45°C and ambient pressure.

3. The method as recited in Claim 1 wherein soaking

2 includes soaking at ambient temperature and pressure.

3. The method as recited in Claim 1 wherein soaking

2 includes soaking in aqueous media for a time sufficient to

3 equilibrate the pad to at least about 10% to about 50% or more of

4 the pad's maximum absorbency.

4. The method as recited in Claim 1 wherein the pad

2 comprises a polymer selected from the group consisting of:

3 6,6 nylon;

4 6,12 nylon;

5 polyketone; and

6 polyurethane.

5. The method as recited in Claim 1 wherein the soaking is

2 performed for a time ranging from about 3 hours to about 2 weeks.

6. The method as recited in Claim 1 wherein the soaking is

2 performed for a time ranging from about 3 hours to about 48

3 hours.

7. The method as recited in Claim 1 wherein the soaking is

2 performed for a time ranging from about 15 hours to about 30

3 hours.

8. The method as recited in Claim 1 wherein the aqueous

2 media includes an additive.

9. The method as recited in Claim 8 wherein the additive

2 comprises a buffer.

10. The method as recited in Claim 9 wherein the buffer is  
2 an acidic buffer having a pH ranging from about 2.0 to about 7.0.

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11. The method as recited in Claim 9 wherein the buffer is  
2 a basic buffer having a pH ranging from about 7.0 to about 14.0.

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12. The method as recited in Claim 8 wherein the additive  
2 is selected from the group consisting of an oxidant, an abrasive,  
3 and an organic amine.

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13. The method as recited in Claim 12 wherein the organic  
2 amine is ethanol amine.

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14. The method as recited in Claim 12 wherein the abrasive  
2 is selected from the group consisting of alumina and silica.

15. A method of packaging a polishing pad for use in  
2 polishing a semiconductor wafer, comprising:  
3       placing a polishing pad in a container configured to retain  
4       an aqueous medium therein;  
5       placing an aqueous medium in the container in a quantity  
6       sufficient to allow the polishing pad to equilibrate; and  
7       sealing the container.

16. The method as recited in Claim 15 wherein said placing  
2 includes maintaining the aqueous media at about 10°C to 45°C and  
3 ambient pressure.

17. The method as recited in Claim 15 wherein said placing  
2 includes maintaining the aqueous media at ambient temperature and  
3 pressure.

18. The method as recited in Claim 15 wherein said placing  
2 includes maintaining the aqueous media for a time sufficient to  
3 equilibrate the pad to at least about 10% to about 50% or more of  
4 the pad's maximum absorbency.

19. The method as recited in Claim 15 wherein the pad  
2 comprises a polymer selected from the group consisting of:

3           6,6 nylon;  
4           6,12 nylon;  
5           polyketone; and  
6           polyurethane.

20. The method as recited in Claim 15 wherein the aqueous  
2       medium includes an additive.

21. The method as recited in Claim 20 wherein the additive  
2       comprises a buffer.

22. The method as recited in Claim 21 wherein the buffer is  
2       an acidic buffer having a pH ranging from about 2.0 to about 7.0.

23. The method as recited in Claim 21 wherein the buffer is  
2       a basic buffer having a pH ranging from about 7.0 to about 14.0.

24. The method as recited in Claim 20 wherein the additive  
2       is selected from the group consisting of an oxidant, an abrasive,  
3       and an organic amine.

25. The method as recited in Claim 24 wherein the organic  
2       amine is ethanol amine.

26. The method as recited in Claim 24 wherein the abrasive  
2 is selected from the group consisting of alumina and silica.

27. A packaged polishing pad, comprising:

2 a sealable moisture tight package having a dimension

3 sufficient to contain a polishing pad therein; and

4 a polishing pad soaked in an aqueous medium and located

5 within the sealable moisture tight package.

28. The packaged polishing pad as recited in Claim 27

2 wherein the aqueous media is maintained at about 10°C to 45°C and

3 ambient pressure.

29. The packaged polishing pad as recited in Claim 27

2 wherein the aqueous media is maintained at ambient temperature

3 and pressure.

30. The packaged polishing pad as recited in Claim 27

2 wherein the aqueous media is maintained for a time sufficient to

3 equilibrate the pad to at least about 10% to about 50% or more of

4 the pad's maximum absorbency.

31. The packaged polishing pad as recited in Claim 27

2 wherein the pad comprises a polymer selected from the group

3 consisting of:

4 6,6 nylon;

5           6,12 nylon;  
6           polyketone; and  
7           polyurethane.

32. The packaged polishing pad as recited in Claim 27  
2       wherein the aqueous medium includes an additive.

32. The packaged polishing pad as recited in Claim 32  
2       wherein the additive comprises a buffer.

33. The packaged polishing pad as recited in Claim 33  
2       wherein the buffer is an acidic buffer having a pH ranging from  
3       about 2.0 to about 7.0.

34. The packaged polishing pad as recited in Claim 33  
2       wherein the buffer is a basic buffer having a pH ranging from  
3       about 7.0 to about 14.0.

35. The packaged polishing pad as recited in Claim 32  
2       wherein the additive is selected from the group consisting of an  
3       oxidant, an abrasive, and an organic amine.

36. The packaged polishing pad as recited in Claim 32  
2 wherein the organic amine is ethanol amine.

37. The packaged polishing pad as recited in Claim 35  
2 wherein the abrasive is selected from the group consisting of  
3 alumina and silica.

38. The packaged polishing pad as recited in Claim 27  
1 wherein the sealable moisture tight package is comprised of a  
2 flexible plastic material.

39. The packaged polishing pad as recited in Claim 38  
1 wherein the flexible plastic material is a heat sealable  
2 material.

40. The packaged polishing pad as recited in Claim 38  
1 wherein the flexible plastic material is mechanically sealable.

41. The packaged polishing pad as recited in Claim 27  
2 wherein the pad is pre-soaked subsequent to location in the  
3 package.

42. The packaged polishing pad as recited in Claim 41  
2 wherein the pad is pre-soaked for a period of time ranging from  
3 about 3 hours to about 2 weeks.

43. The packaged polishing pad as recited in Claim 41  
2 wherein the pad is pre-soaked for a period of time ranging from  
about 15 hours to about 30 hours.